

facility is 87,065 L/day (23,000 gal/day). Even at the lowest operating capacity of MPF, the capacity of the sewage treatment plant would be exceeded and would require expansion.

Solid sanitary wastes generated by MPF (450 ppy) would be expected to increase the total from WIPP by a factor of 12. This would accelerate DOE's consumption of available capacity in both onsite and offsite facilities.

## **5.9 UNAVOIDABLE ADVERSE IMPACTS**

Implementing any of the MPF alternatives analyzed in this EIS would result in unavoidable adverse impacts on the environment. Generally, the impacts are small and would be from the construction and operation of new facilities at any one of the five locations analyzed.

Operations at Los Alamos Site, NTS, SRS, Pantex Site, or Carlsbad Site would all result in unavoidable radiation exposure to workers and the general public. Workers would be exposed to direct radiation and other chemicals associated with operating MPF and handling and transporting radioactive waste. The public would be exposed to radioactive contaminants released to the air and through exposure to radioactive materials, including waste, that would be transported both to the proposed MPF and to ultimate disposition sites for radioactive wastes. Discussion of the health effects to workers and the public is included in Sections 5.2.9, 5.3.9, 5.4.9, 5.5.9, and 5.6.9. Potential transportation impacts are described in Sections 5.2.12, 5.3.12, 5.4.12, 5.5.12, and 5.6.12.

Unavoidable quantities of radioactive and nonradioactive wastes would be generated by implementing any of the MPF alternatives. This waste would need to be segregated, stored, managed, and transported to final disposal locations.

### **Discussion of Air Impacts**

For all alternatives, various chemical and radiological constituents would be released to the air. Generally, nonradiological releases would result in incremental increases of less than 1 percent. For radiological releases, while the incremental increases compared to the baseline and all reasonably foreseeable actions is large for most alternatives, the actual releases for all alternatives would result in a dose significantly less than the DOE and EPA standard of 10 mrem/yr. Additionally, there would be temporary and localized effects on air quality from associated construction and excavation activities.

There would also be temporary impacts from the construction of new facilities associated with the MPF project. These impacts would consist of increased fugitive dust, increased potential for erosion and stormwater pollution, and increased construction vehicle traffic and emissions.

## **5.10 RELATIONSHIP BETWEEN SHORT-TERM AND LONG-TERM USES**

Implementation of any of the alternatives would require short-term commitments of resources such as land use and permanent commitment of resources such as energy.

Under the No Action Alternative, environmental resources have already been committed. DOE would continue to use the plutonium pit manufacturing capability of PF-4 located in TA-55 at LANL. The current rate of resource use would continue.

For all other alternatives, short-term use of resources would increase, generally proportional to the number of plutonium pits manufactured each year. Short-term commitments of resources include the land and materials needed to construct the facilities, the labor commitment, transportation and associated impacts. Workers, the public, and the environment would be exposed to small amounts of radioactive and hazardous materials over the short-term from operations, waste handling, and transportation. The long-term benefit is the remedy of the U.S. security concern that the lack of long-term pit production capability is a national security issue requiring timely resolution. Since 1989, DOE has been without the capability to produce plutonium pits, which results in a decrease in the safety and reliability of the U.S. nuclear weapons stockpile.

Regardless of which alternative and location is selected, air emissions associated with the proposed MPF would introduce small quantities of radiological and nonradiological pollutants to the air around Los Alamos Site, NTS, SRS, Pantex Site, or Carlsbad Site. Over the operating period, these emissions would result in cumulative exposures to the workers, the public, and the environment. However, emissions would be within air quality and radiation exposure standards at any of the proposed sites, at all proposed levels of production. There would be no significant residual environmental effects on long-term environmental viability.

The management and disposal of radioactive wastes, sanitary solid and liquid wastes, and small amounts of hazardous waste would require temporary commitment of resources for treatment and storage, and long-term commitment of land for the disposal of radioactive wastes.

Continued and increased employment, expenditures, and generated tax revenues would occur during the short-term benefiting local, regional, and state economies. These benefits would occur at any location selected for the MPF project. Long-term economic gain could result from local governments investing project-generated tax revenues into infrastructure and other services.

Upon the closure of the MPF facilities, and eventual return of DOE land to public use in the future, DOE could decontaminate and decommission the facilities and equipment, allowing for potential future reuse. All five proposed locations for the MPF are on currently dedicated DOE facilities handling nuclear materials and wastes. Therefore, no change in long-term land use is anticipated. The short-term resources to operate the MPF at any of the proposed sites would not affect the long-term productivity of the sites.

## **5.11 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

Irreversible and irretrievable commitment of resources for each alternative involving the new proposed MPF would include the commitment of mineral, water and energy resources for construction. For all alternatives, including the No Action Alternative, mineral, chemical, energy resources, process gases, and water would all be irretrievably committed.